

A Brighter Solution

# AMP DISPLAY INC.

## SPECIFICATIONS

### 10.0-IN COLOR TFT MODULE

CUSTOMER:

|                      |                            |
|----------------------|----------------------------|
| CUSTOMER PART NO.    |                            |
| AMP DISPLAY PART NO. |                            |
| APPROVED BY:         | <b>AM-1024600BTMQW-00H</b> |
| DATE:                |                            |
|                      |                            |

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APPROVED FOR SPECIFICATIONS

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APPROVED FOR SPECIFICATION AND PROTOTYPES

## AMP DISPLAY INC

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## RECORD OF REVISION

| Revision Date | Page | Contents                        | Editor |
|---------------|------|---------------------------------|--------|
| 2009/02/02    | --   | New Release                     | John   |
| 2009/11/04    | 4    | Correct ABSOLUTE MAX. RATINGS & | John   |
|               | 14   | RELIABILITY TEST CONDITIONS     |        |

## 1. Features

10 inch is Amorphous-TFT-LCD (Thin Film Transistor Liquid Crystal Display) module. This module is composed of a 10" TFT-LCD panel, a driving circuit and backlight system. This TFT LCD has a 10 (17:10) inch diagonally measured active display area with WSVGA (1024 horizontal by 600 vertical pixel) resolution.

- (1) Construction: 10" a-Si TFT active matrix, White LED Backlight .
- (2) Resolution (pixel): 1024(R.G.B) X600
- (3) Number of the Colors : 262K colors ( R , G , B 6 bit digital each)
- (4) Display mode : Normally White
- (5) Interface: One channel LVDS interface.
- (6) Power Supply Voltage: 3.3V single power input.
- (7) Build-in LED Driver IC. (5.0V Input Voltage).
- (8) Viewing Direction: 6 O'clock.
- (9) RoHS Compliance.

## 2. PHYSICAL SPECIFICATIONS

| Item              | Specifications                             | unit |
|-------------------|--------------------------------------------|------|
| LCD size          | 10 inch (Diagonal)                         |      |
| Resolution        | 1024 x 3(RGB) x 600                        | dot  |
| Pixel pitch       | 0.21525(W) x 0.21525(H)                    | mm   |
| Active area       | 220.42(W) x 129.15(H)                      | mm   |
| Module size       | 235.0(W) x 145.8(H) x 5.5(D)               | mm   |
| Surface treatment | Antiglare, Hard-Coating (3H) with EWV film |      |
| Color arrangement | RGB-stripe                                 |      |
| interface         | LVDS                                       |      |
| Weight            | 253(Typ)                                   | g    |

### 3. ABSOLUTE MAX. RATINGS

(GND = AVSS = 0V)

| Item                  | Symbol           | Values |      | UNIT | Note |
|-----------------------|------------------|--------|------|------|------|
|                       |                  | Min.   | Max. |      |      |
| Power voltage         | V <sub>LED</sub> | -0.3   | 6.0  | V    |      |
|                       | VDD              | -0.3   | 6.0  |      |      |
| Operation temperature | T <sub>OP</sub>  | 0      | 50   | °C   |      |
| Storage temperature   | T <sub>ST</sub>  | -20    | 60   | °C   |      |

### 4. Mechanical Information

| Item        |            | Min.  | Typ.  | Max.  | UNIT |
|-------------|------------|-------|-------|-------|------|
| Module size | Horizontal | 234.5 | 235   | 235.5 | mm   |
|             | Vertical   | 145.3 | 145.8 | 146.3 | mm   |
|             | Depth      | -     | 5.5   | 5.8   | mm   |
| Weight      |            | -     | 253   | 270   | g    |

### 5. ELECTRICAL CHARACTERISTICS

#### 5-1 Typical Operation Conditions

| Item                         | Symbol           | Values |      |      | UNIT | Note                      |
|------------------------------|------------------|--------|------|------|------|---------------------------|
|                              |                  | Min.   | Typ. | Max. |      |                           |
| Power voltage                | VDD              | 3.0    | 3.3  | 3.6  | V    | Note1                     |
| Power Supply Voltage For LED | V <sub>LED</sub> | 4.7    | 5.0  | 5.3  | V    |                           |
| Current of power supply      | IDD              | -      | 0.3  | -    | A    | VDD=3.3V<br>Black pattern |

Note 1: VDD-dip condition :

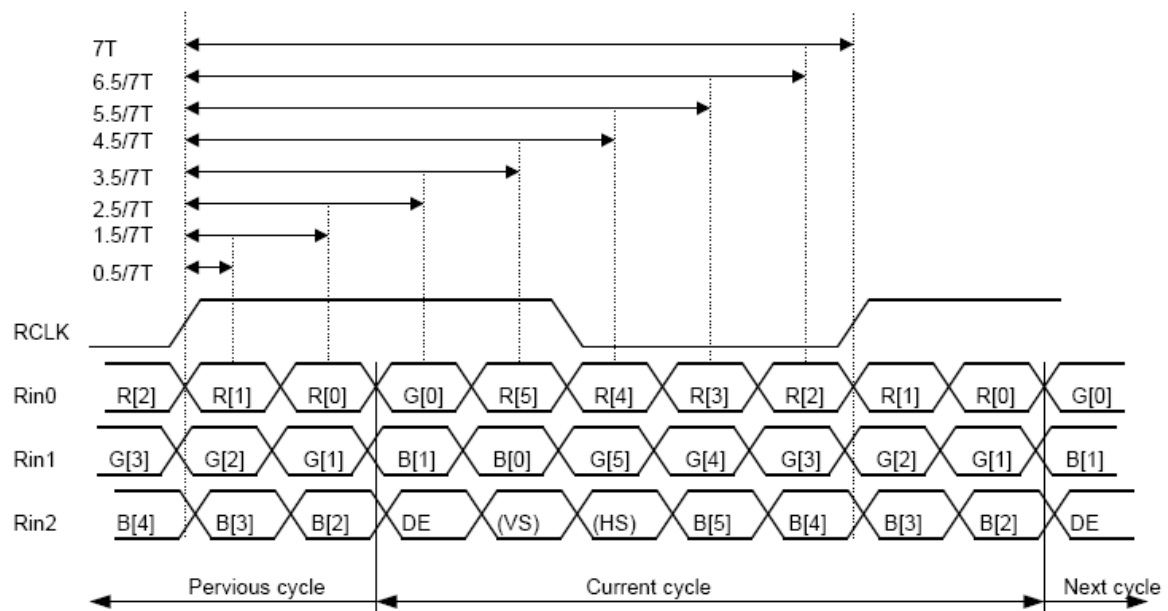
when  $2.7V \leq VDD < 3.0V$  ,  $t_d \leq 10ms$ .

$VDD > 3.0V$  , VDD-dip condition should be same as VDD-turn-con condition.

## 5-2 Switching Characteristics for LVDS Receiver

| Item                              | Symbol          | Min.                   | Typ. | Max.                           | Unit | Condition             |
|-----------------------------------|-----------------|------------------------|------|--------------------------------|------|-----------------------|
| Differential Input High Threshold | V <sub>th</sub> | --                     | --   | 100                            | mV   | V <sub>CM</sub> =1.2V |
| Differential Input Low Threshold  | V <sub>tl</sub> | -100                   | --   | --                             | mV   |                       |
| Input current                     | I <sub>IN</sub> | -10                    | --   | +10                            | uA   |                       |
| Differential input Voltage        | V <sub>ID</sub> | 0.1                    | --   | 0.6                            | V    |                       |
| Common Mode Voltage Offset        | V <sub>CM</sub> | ( V <sub>ID</sub>  /2) | 1.25 | 1.8-0.4-( V <sub>ID</sub>  /2) | V    |                       |

## 5-3 Bit Mapping & Interface Definition



LVDS Receiver Input Timing Definition  
for 6bits LVDS input

## 6. Optical Specifications

| Item                 | Symbol     | Condition                           | Values |      |      | Unit              | Note           |
|----------------------|------------|-------------------------------------|--------|------|------|-------------------|----------------|
|                      |            |                                     | Min.   | Typ. | Max. |                   |                |
| Viewing angle        | $\theta L$ | $(CR \geq 10)$                      | 60     | 70   | --   | degree            | Note1<br>Note2 |
|                      | $\theta R$ |                                     | 60     | 70   | --   |                   |                |
|                      | $\theta U$ |                                     | 40     | 50   | --   |                   |                |
|                      | $\theta D$ |                                     | 50     | 60   | --   |                   |                |
| Response time        | TR         | Normal<br>$\theta = \Phi = 0^\circ$ | --     | 5    | 7    | msec              | Note3          |
|                      | TF         |                                     | --     | 20   | 28   | msec              |                |
| Contrast ratio       | CR         |                                     | 400    | 500  | --   | --                | Note2          |
| Color chromaticity   | WX         |                                     | 0.26   | 0.31 | 0.36 | --                | Note1<br>Note4 |
|                      | WY         |                                     | 0.28   | 0.33 | 0.38 | --                |                |
| Luminance            | L          |                                     | 200    | 250  | --   | cd/m <sup>2</sup> | Note4          |
| Luminance uniformity | YU         |                                     | 70     | --   | --   | %                 | Note5          |

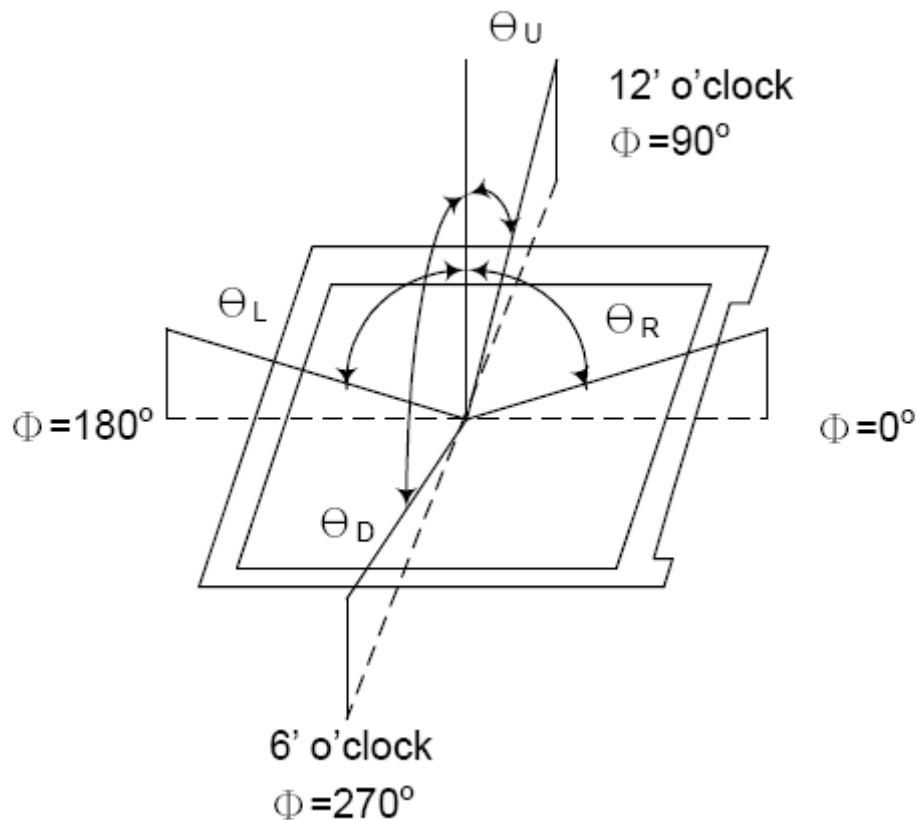
### 6.1 Measuring surrounding

- dark room
- LED current :  $I_L=200\text{mA}$
- Ambient temperature :  $25 \pm 2^\circ\text{C}$
- 15min. warm-up time.

## 6.2 Measuring Equipment

The optical characteristics should be measured in dark room. After 30 minutes operation, the optical properties are measured at the center point of the LCD screen. (Response time is measured by Photo detector TOPCON BM-7 of view :  $1^\circ$  / Height : 120mm.)

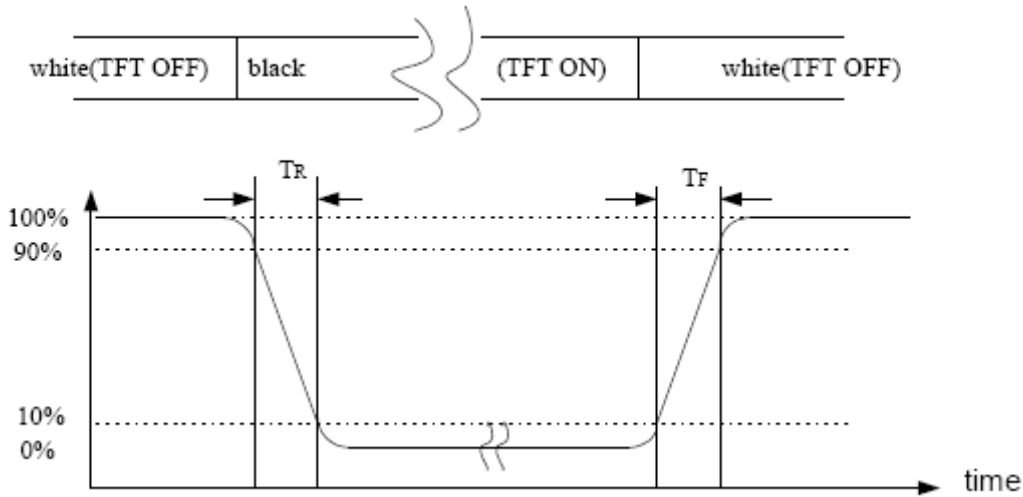
Note 1 : Definition of viewing angle range



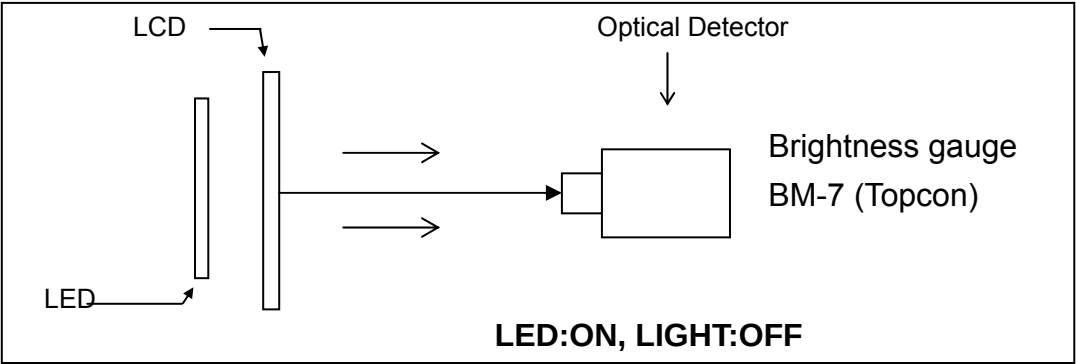
Note 2 : Definition of Contrast Ratio (CR) :  
measured at the center point of panel

$$\text{CR} = \frac{\text{Luminance with all pixels white}}{\text{Luminance with all pixels black}}$$

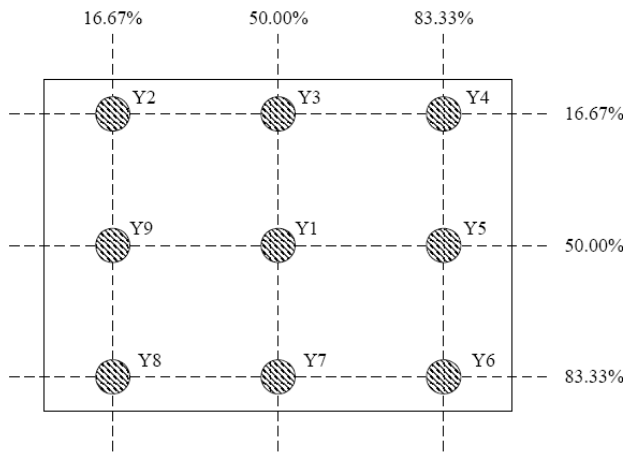
Note 3 : Definition of Response time : Sum of  $T_R$  and  $T_F$



Note 4 : Definition of optical measurement setup



Note 5 : Definition of brightness uniformity



$$\text{Luminance uniformity} = \frac{\text{(Min Luminance of 9 points)}}{\text{(Max Luminance of 9 points)}} \times 100\%$$



## 7. INTERFACE

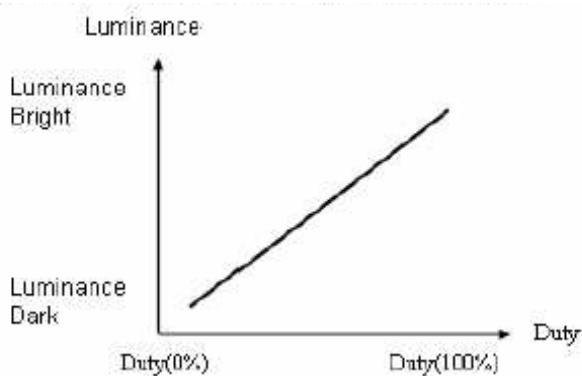
### TFT LCD Panel Driving Section

| Pin No. | Symbol    | Description               | Note  |
|---------|-----------|---------------------------|-------|
| 1       | GND       | Ground                    |       |
| 2       | VDD       | 3.3V Power                |       |
| 3       | VDD       | 3.3V Power                |       |
| 4       | V_EDID    | 3.3V Power for EDID       |       |
| 5       | ADJ       | Adjust for LED brightness | Note* |
| 6       | CLK_EDID  | EDID Clock Input          |       |
| 7       | DATA_EDID | EDID Data Input           |       |
| 8       | RXIN0-    | LVDS Signal - channel0-   |       |
| 9       | RXIN0+    | LVDS Signal+ channel0+    |       |
| 10      | GND       | Ground                    |       |
| 11      | RXIN1-    | Data Input channel1-      |       |
| 12      | RXIN1+    | Data Input channel1+      |       |
| 13      | GND       | Ground                    |       |
| 14      | RXIN2-    | Data Input channel2-      |       |
| 15      | RXIN2+    | Data Input channel2+      |       |
| 16      | GND       | Ground                    |       |
| 17      | RXCLKIN-  | Data Input CLK-           |       |
| 18      | RXCLKIN+  | Data Input CLK+           |       |
| 19      | GND       | Ground                    |       |
| 20      | NC        | NC                        |       |
| 21      | NC        | NC                        |       |
| 22      | GND       | Ground                    |       |
| 23      | GND       | Ground                    |       |
| 24      | VLED      | VLED Power +5V            |       |
| 25      | VLED      | VLED Power +5V            |       |

|    |      |                |  |
|----|------|----------------|--|
| 26 | VLED | VLED Power +5V |  |
| 27 | NC   | NC             |  |
| 28 | NC   | NC             |  |
| 29 | NC   | NC             |  |
| 30 | NC   | NC             |  |

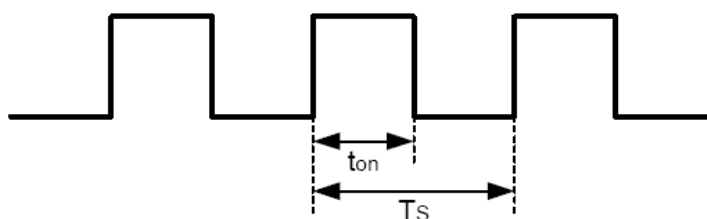
Note\* : The brightness of LCD panel could be changed by adjusting ADJ

(1)ADJ adjust brightness to control Pin. Pulse duty the bigger the brighter.



(2) ADJ Signal=0~3.3V , Operation Conditions :

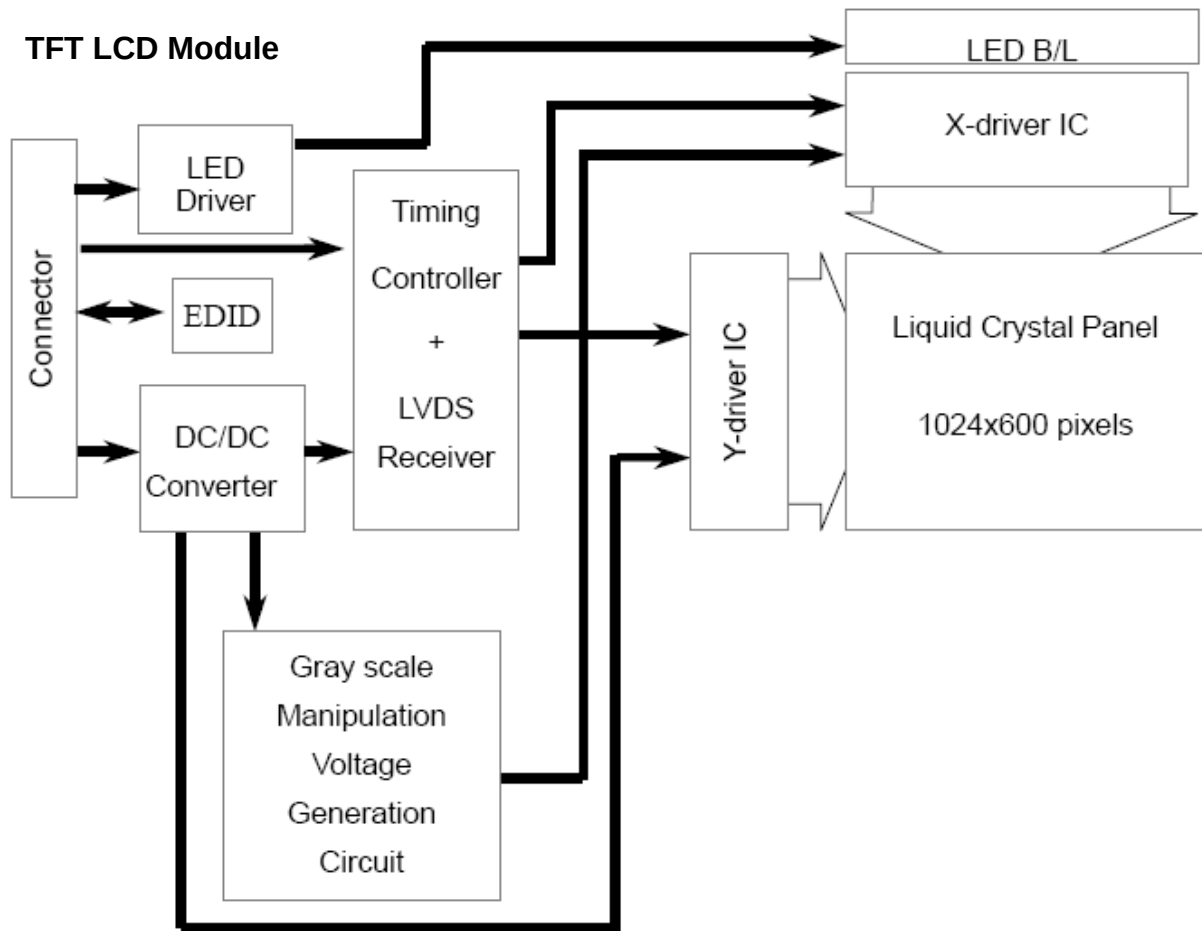
| Parameter            | Symbol     | Conditions | Min | Typ | Max | Unit |
|----------------------|------------|------------|-----|-----|-----|------|
| ADJ Logic-High Level | $V_{ADJH}$ |            | 1.8 | 3.3 | 3.6 | V    |
| ADJ Logic-Low Level  | $V_{ADJL}$ |            | 0   | 0   | 0.4 | V    |
| Dimming Frequency    | $F_{ADJ}$  |            | 18  | 20  | 22  | kHz  |
| Dimming Duty Cycle   | D          |            | 20  | --  | 100 | %    |



$$D = t_{on} / T_S \times 100\%$$

$$F_{ADJ} = 1 / T_S$$

## 8. BLOCK DIAGRAM :

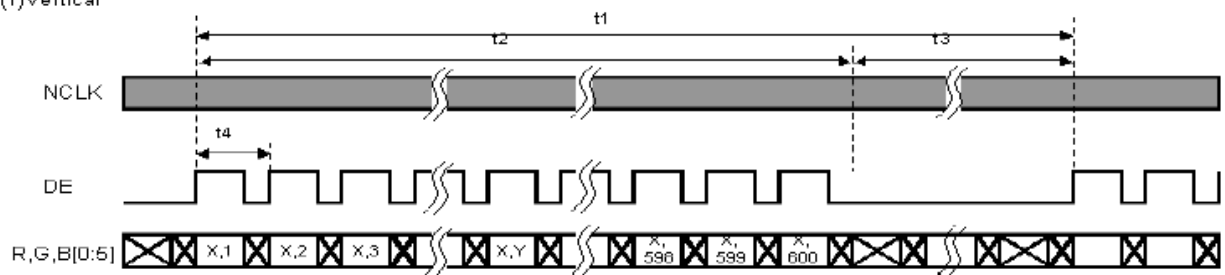


## 9. Interface Timing (DE mode)

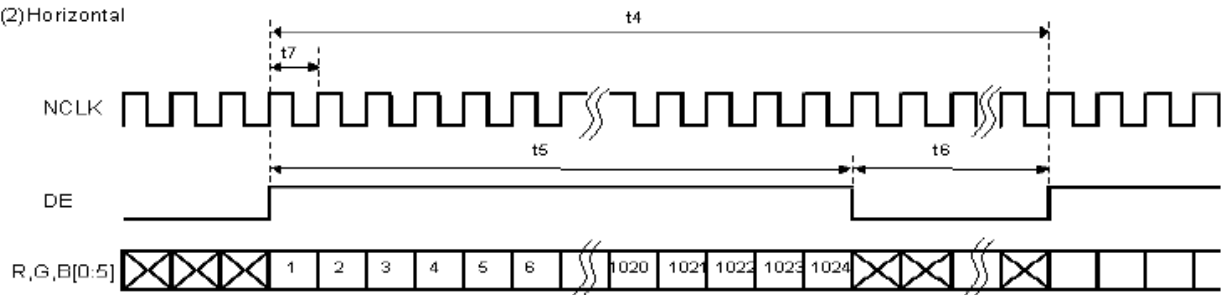
| Item                     | Symbol | Min. | Typ. | Max.  | Unit  |
|--------------------------|--------|------|------|-------|-------|
| Frame Rate               | --     | 55   | 60   | 65    | Hz    |
| Frame Period             | t1     | 612  | 625  | 638   | line  |
| Vertical Display Time    | t2     | 600  | 600  | 600   | line  |
| Vertical Blanking Time   | t3     | 12   | 25   | 38    | line  |
| 1 Line Scanning Time     | t4     | 1160 | 1200 | 1240  | clock |
| Horizontal Display Time  | t5     | 1024 | 1024 | 1024  | clock |
| Horizontal Blanking Time | t6     | 136  | 176  | 216   | clock |
| Clock Rate               | t7     | 39   | 45   | 51.42 | MHz   |

### Timing Diagram of Interface Signal (DE mode)

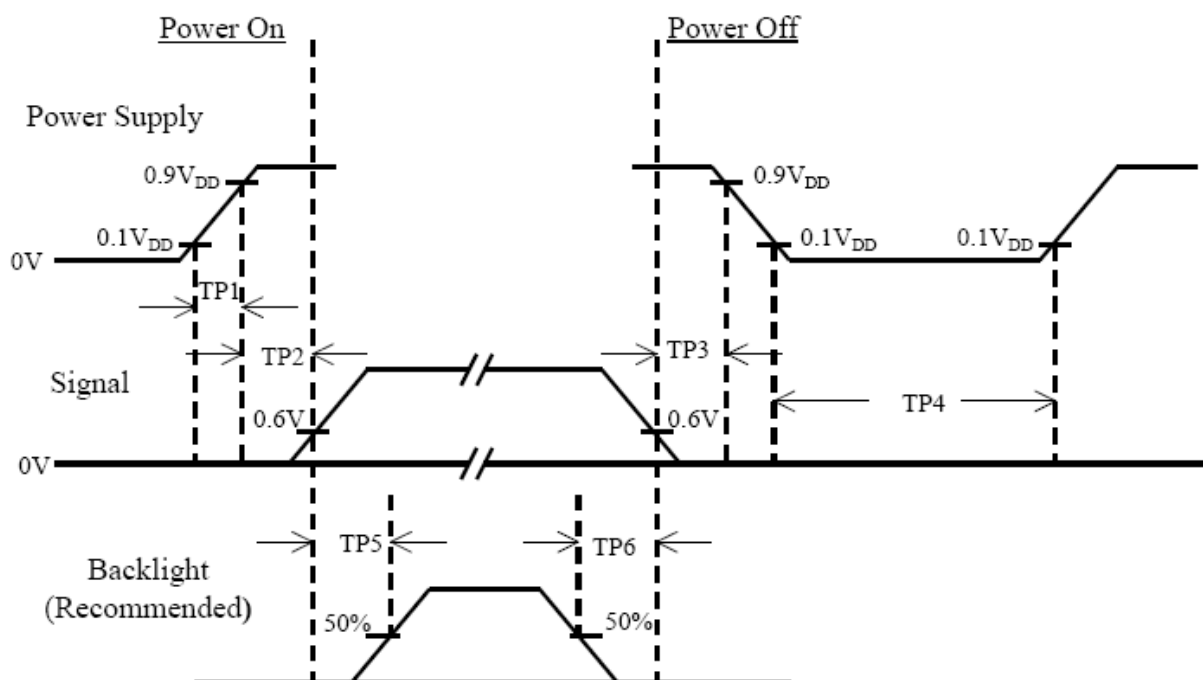
(1) Vertical



(2) Horizontal



## 10. Power On/Off Sequence



| Item | Min. | Typ. | Max. | Unit | Remark |
|------|------|------|------|------|--------|
| TP1  | 0.5  | --   | 10   | msec |        |
| TP2  | 0    | --   | 50   | msec |        |
| TP3  | 0    | --   | 50   | msec |        |
| TP4  | 500  | --   | --   | msec |        |
| TP5  | 200  | --   | --   | msec |        |
| TP6  | 200  | --   | --   | msec |        |

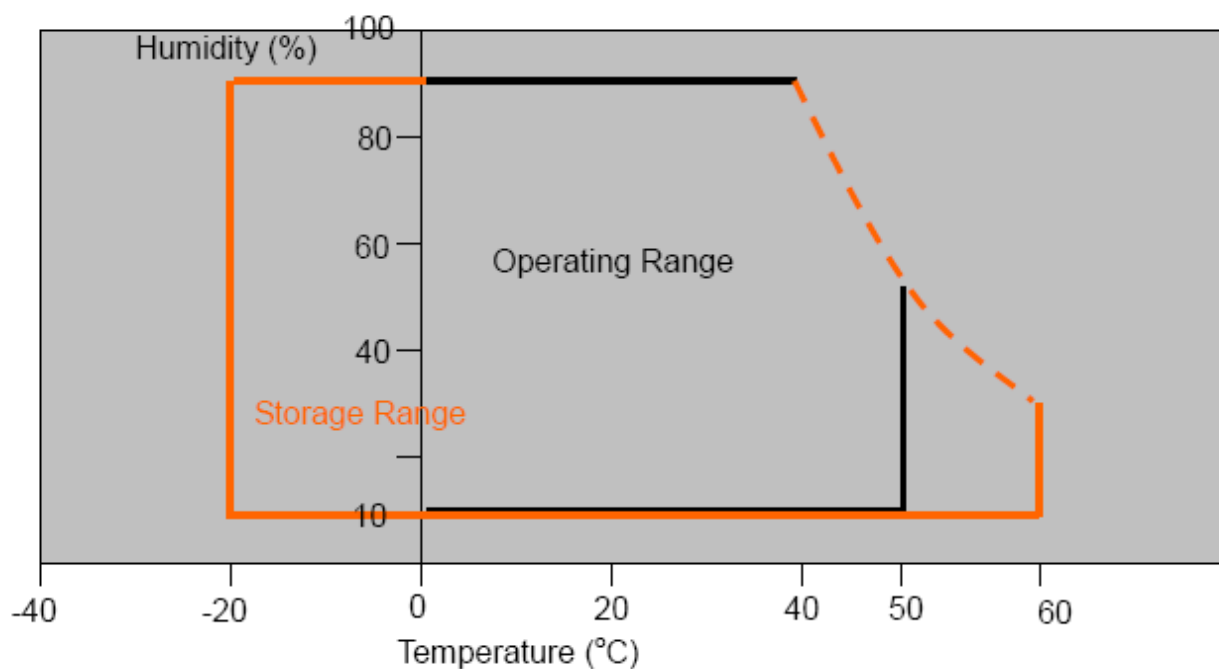
Note :

- (1) The supply voltage of the external system for the module input should be the same as the definition of VDD.
- (2) Apply the lamp voltage within the LCD operation range. When the back-light turns on before the LCD operation or the LCD turns off before the back-light turns off, the display may momentarily become white.
- (3) In case of VDD = off level, please keep the level of input signal on the low or keep a high impedance.
- (4) TP4 should be measured after the module has been fully discharged between power off and on period.
- (5) Interface signal shall not be kept at high impedance when the power is on.

## 11. RELIABILITY TEST CONDITIONS

| Item                       | Test Conditions                                         | Note |
|----------------------------|---------------------------------------------------------|------|
| High Temperature Storage   | Ta = 60°C 240 hrs                                       |      |
| Low Temperature Storage    | Ta = -20°C 240 hrs                                      |      |
| High Temperature Operation | Ts = 50°C 240 hrs                                       |      |
| Low Temperature Operation  | Ta = 0°C 240 hrs                                        |      |
| Thermal Shock              | -20°C /30 min ~ +60°C /30 min 100 cycles                |      |
| Shock                      | Half-Sine, 200G, 2ms, ±XYZ, 1time                       |      |
| Vibration                  | Sine Wave<br>1.5G, 5~500Hz, XYZ<br>30min/each direction |      |

### Storage / Operating temperature



**Note** .Max wet bulb temp.=39°C

## **12. General Precautions**

### **12.1 Use Restriction**

This product is not authorized for use in life supporting systems, aircraft navigation control systems, military systems and any other application where performance failure could be life-threatening or otherwise catastrophic.

### **12.2 Disassembling or Modification**

Do not disassemble or modify the module. It may damage sensitive parts inside LCD module, and may cause scratches or dust on the display. Ampire does not warrant the module, if customers disassemble or modify the module.

### **12.3 Breakage of LCD Panel**

- 12.3.1. If LCD panel is broken and liquid crystal spills out, do not ingest or inhale liquid crystal, and do not contact liquid crystal with skin.
- 12.3.2. If liquid crystal contacts mouth or eyes, rinse out with water immediately.
- 12.3.3. If liquid crystal contacts skin or cloths, wash it off immediately with alcohol and rinse thoroughly with water.
- 12.3.4. Handle carefully with chips of glass that may cause injury, when the glass is broken.

### **12.4 Electric Shock**

- 12.4.1. Disconnect power supply before handling LCD module.
- 12.4.2. Do not pull or fold the LED cable.
- 12.4.3. Do not touch the parts inside LCD modules and the fluorescent LED's connector or cables in order to prevent electric shock.

### **12.5 Absolute Maximum Ratings and Power Protection Circuit**

- 12.5.1. Do not exceed the absolute maximum rating values, such as the supply voltage variation, input voltage variation, variation in parts' parameters, environmental temperature , etc., otherwise LCD module may be damaged.
- 12.5.2. Please do not leave LCD module in the environment of high humidity and high temperature for a long time.
- 12.5.3. It's recommended to employ protection circuit for power supply.

## **12.6 Operation**

- 12.6.1 Do not touch, push or rub the polarizer with anything harder than HB pencil lead.
- 12.6.2 Use fingerstalls of soft gloves in order to keep clean display quality, when persons handle the LCD module for incoming inspection or assembly.
- 12.6.3 When the surface is dusty, please wipe gently with absorbent cotton or other soft material.
- 12.6.4 Wipe off saliva or water drops as soon as possible. If saliva or water drops contact with polarizer for a long time, they may causes deformation or color fading.
- 12.6.5 When cleaning the adhesives, please use absorbent cotton wetted with a little petroleum benzine or other adequate solvent.

## **12.7 Mechanism**

Please mount LCD module by using mounting holes arranged in four corners tightly.

## **12.8 Static Electricity**

- 12.8.1 Protection film must remove very slowly from the surface of LCD module to prevent from electrostatic occurrence.
- 12.8.2 Because LCD module use CMOS-IC on circuit board and TFT-LCD panel, it is very weak to electrostatic discharge. Please be careful with electrostatic discharge. Persons who handle the module should be grounded through adequate methods.

## **12.9 Strong Light Exposure**

The module shall not be exposed under strong light such as direct sunlight. Otherwise, display characteristics may be changed.

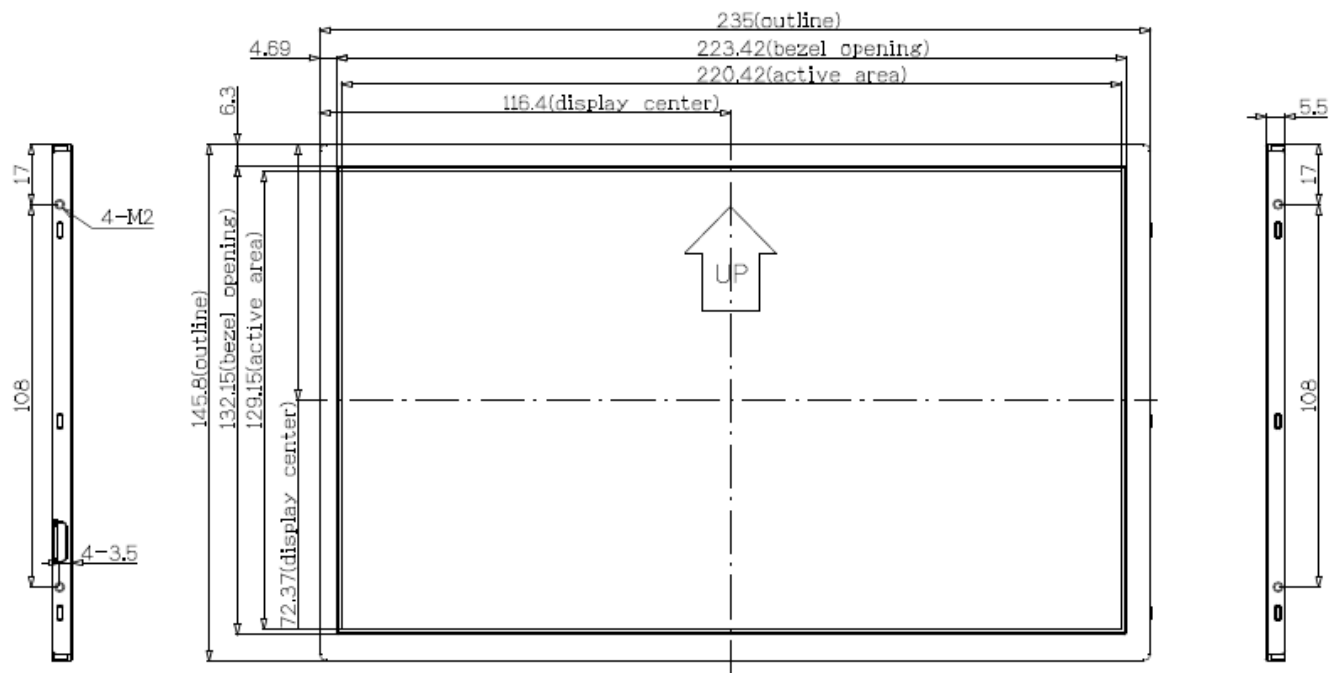
## **12.10 Disposal**

When disposing LCD module, obey the local environmental regulations.



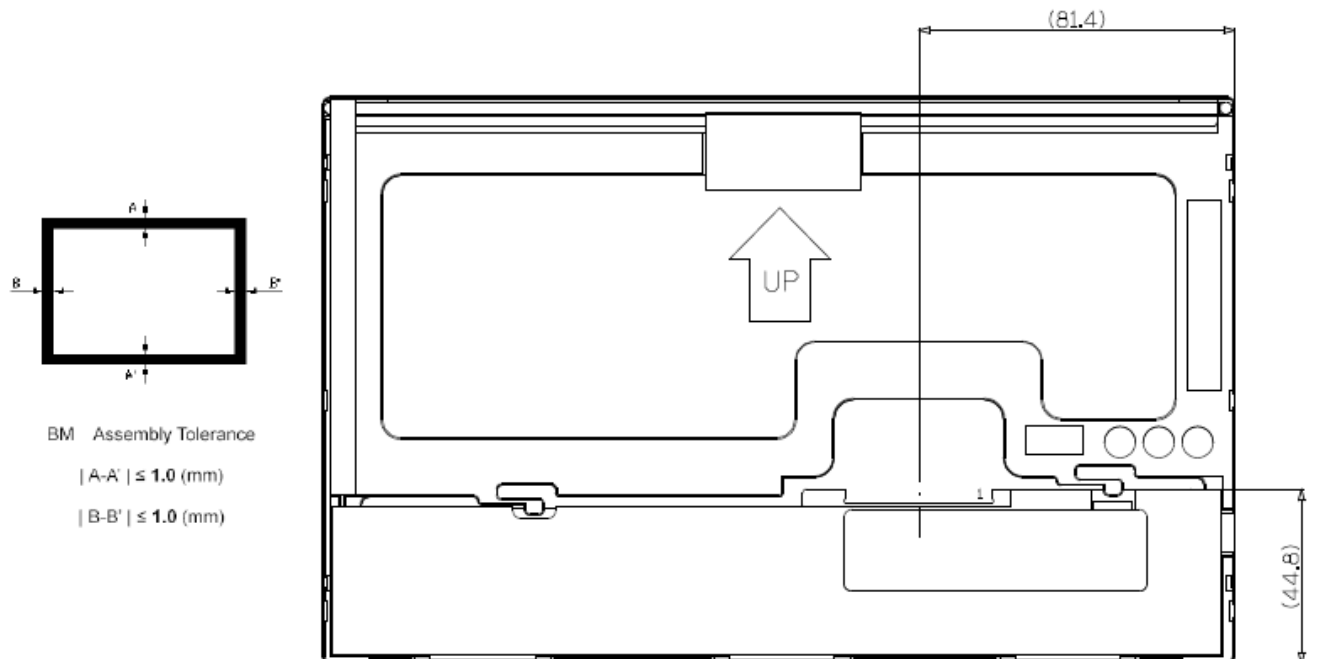
### 13. OUTLINE DIMENSION

Unit:mm



NOTE:

- NOTE:  
1. GENERAL TOLERANCE :  $\pm 0.3\text{mm}$ .  
2. ALLOWED DEPTH OF USERHOLE SCREW INSERTION IS 15mm Max.  
3. USERHOLE SCREW OF TORQUE = 2.0kgf/cm Max.



## 14. EDID TABLE

| Byte#<br>(Decimal) | Byte#<br>(HEX) | Field Name & Comments                            | Value<br>(HEX) | Value<br>(BIN) | Value<br>(DEC) |
|--------------------|----------------|--------------------------------------------------|----------------|----------------|----------------|
| 0                  | 0              | Header                                           | 00             | 00000000       | 0              |
| 1                  | 1              | Header                                           | FF             | 11111111       | 255            |
| 2                  | 2              | Header                                           | FF             | 11111111       | 255            |
| 3                  | 3              | Header                                           | FF             | 11111111       | 255            |
| 4                  | 4              | Header                                           | FF             | 11111111       | 255            |
| 5                  | 5              | Header                                           | FF             | 11111111       | 255            |
| 6                  | 6              | Header                                           | FF             | 11111111       | 255            |
| 7                  | 7              | Header                                           | 00             | 00000000       | 0              |
| 8                  | 8              | EISA Manufacture Code LSB (3 character ID = HSD) | 22             | 00100010       | 34             |
| 9                  | 9              | Compressed ASCII                                 | 64             | 01100100       | 100            |
| 10                 | 0A             | Product Code "1001"                              | E9             | 11101001       | 233            |
| 11                 | 0B             | Hex, LSB first                                   | 03             | 00000011       | 3              |
| 12                 | 0C             | LCD module Serial No - Preferred but Optional    | 00             | 00000000       | 0              |
| 13                 | 0D             | LCD module Serial No - Preferred but Optional    | 00             | 00000000       | 0              |
| 14                 | 0E             | LCD module Serial No - Preferred but Optional    | 00             | 00000000       | 0              |
| 15                 | 0F             | LCD module Serial No - Preferred but Optional    | 00             | 00000000       | 0              |
| 16                 | 10             | Week of manufacture=18                           | 12             | 00010010       | 18             |
| 17                 | 11             | Year of manufacture = 2008                       | 12             | 00010010       | 18             |
| 18                 | 12             | EDID Structure Version # = 1                     | 01             | 00000001       | 1              |
| 19                 | 13             | EDID revision # = 3                              | 03             | 00000011       | 3              |
| 20                 | 14             | Video input definition = Digital input, CRGB     | 80             | 10000000       | 128            |
| 21                 | 15             | Max H image size = 22cm                          | 16             | 00010110       | 22             |
| 22                 | 16             | Max V image size = 13cm                          | 0D             | 00001101       | 13             |
| 23                 | 17             | Display Gamma = 2.2                              | 78             | 01111000       | 120            |
| 24                 | 18             | Feature support (DPMS) = Active off, RGB color   | 0A             | 00001010       | 10             |
| 25                 | 19             | Red/green low bits (10000110)                    | 86             | 10000110       | 134            |
| 26                 | 1A             | Blue/white low bits (00100110)                   | 26             | 00100110       | 38             |
| 27                 | 1B             | Red x , Red x = 0.58                             | 94             | 10010100       | 148            |
| 28                 | 1C             | Red y , Red y = 0.34                             | 57             | 01010111       | 87             |
| 29                 | 1D             | Green x , Green x = 0.317                        | 51             | 01010001       | 81             |
| 30                 | 1E             | Green y , Green y = 0.564                        | 90             | 10010000       | 144            |
| 31                 | 1F             | Blue x , Blue x = 0.152                          | 27             | 00100111       | 39             |

| Byte#<br>(Decimal) | Byte#<br>(HEX) | Field Name & Comments                   | Value<br>(HEX) | Value<br>(BIN) | Value<br>(DEC) |
|--------------------|----------------|-----------------------------------------|----------------|----------------|----------------|
| 32                 | 20             | Blue y , Blue y = 0.131                 | 21             | 00100001       | 33             |
| 33                 | 21             | White x , White x = 0.31                | 4F             | 01001111       | 79             |
| 34                 | 22             | White y , White y = 0.33                | 54             | 01010100       | 84             |
| 35                 | 23             | Established timing 1                    | 00             | 00000000       | 0              |
| 36                 | 24             | Established timing 2                    | 00             | 00000000       | 0              |
| 37                 | 25             | Manufacturer's timings                  | 00             | 00000000       | 0              |
| 38                 | 26             | Standard timing #1 was not used         | 01             | 00000001       | 1              |
| 39                 | 27             |                                         | 01             | 00000001       | 1              |
| 40                 | 28             | Standard timing #2 was not used         | 01             | 00000001       | 1              |
| 41                 | 29             |                                         | 01             | 00000001       | 1              |
| 42                 | 2A             | Standard timing #3 was not used         | 01             | 00000001       | 1              |
| 43                 | 2B             |                                         | 01             | 00000001       | 1              |
| 44                 | 2C             | Standard timing #4 was not used         | 01             | 00000001       | 1              |
| 45                 | 2D             |                                         | 01             | 00000001       | 1              |
| 46                 | 2E             | Standard timing #5 was not used         | 01             | 00000001       | 1              |
| 47                 | 2F             |                                         | 01             | 00000001       | 1              |
| 48                 | 30             | Standard timing #6 was not used         | 01             | 00000001       | 1              |
| 49                 | 31             |                                         | 01             | 00000001       | 1              |
| 50                 | 32             | Standard timing #7 was not used         | 01             | 00000001       | 1              |
| 51                 | 33             |                                         | 01             | 00000001       | 1              |
| 52                 | 34             | Standard timing #8 was not used         | 01             | 00000001       | 1              |
| 53                 | 35             |                                         | 01             | 00000001       | 1              |
| 54                 | 36             | Detailed timing/monitor (descriptor #1) | 94             | 10010100       | 148            |
| 55                 | 37             | 1024x600 @60Hz: Pixel Clock = 45 MHz    | 11             | 00010001       | 17             |
| 56                 | 38             | Horizontal active=1024 pixels (L8b)     | 00             | 00000000       | 0              |
| 57                 | 39             | Horizontal blanking= 176 pixels (L8b)   | B0             | 10110000       | 176            |
| 58                 | 3A             | HA (U4b): HB (U4b)                      | 40             | 01010000       | 64             |
| 59                 | 3B             | Vertical active=600 lines (L8b)         | 58             | 01011000       | 88             |
| 60                 | 3C             | Vertical blanking= 25 lines (L8b)       | 19             | 00011001       | 25             |
| 61                 | 3D             | HA (U4b): HB (U4b)                      | 20             | 00100000       | 32             |
| 62                 | 3E             | H sync. Offset= 53 pixels               | 35             | 00110101       | 53             |
| 63                 | 3F             | H sync. Width= 35 pixels                | 23             | 00100011       | 35             |

| Byte#<br>(Decimal) | Byte#<br>(HEX) | Field Name & Comments                                                               | Value<br>(HEX) | Value<br>(BIN) | Value<br>(DEC) |
|--------------------|----------------|-------------------------------------------------------------------------------------|----------------|----------------|----------------|
| 64                 | 40             | V sync. Offset= 4 lines                                                             | 45             | 01000101       | 69             |
| 65                 | 41             | V sync. Width= 5 lines                                                              | 00             | 00000000       | 0              |
| 66                 | 42             | H image size = 220 mm (L8b)                                                         | DC             | 11011100       | 220            |
| 67                 | 43             | V image size = 129 mm (L8b)                                                         | 81             | 10000001       | 129            |
| 68                 | 44             | Horizontal Image (U4b): Vertical Image (U4b)                                        | 00             | 00000000       | 0              |
| 69                 | 45             | No Horizontal Border=0                                                              | 00             | 00000000       | 0              |
| 70                 | 46             | No Vertical Border=0                                                                | 00             | 00000000       | 0              |
| 71                 | 47             | Non-interlaced, Normal display, No stereo, Digital separate sync, H/V pol Negatives | 19             | 00011000       | 25             |
| 72                 | 48             | Detailed timing/monitor (descriptor #2)                                             | 16             | 00010110       | 22             |
| 73                 | 49             | 1024x600 @65Hz: Pixel Clock = 51.42 MHz                                             | 14             | 00010100       | 20             |
| 74                 | 4A             | Horizontal active=1024 pixels (L8b)                                                 | 00             | 00000000       | 0              |
| 75                 | 4B             | Horizontal blanking=216pixels (L8b)                                                 | D8             | 11011000       | 216            |
| 76                 | 4C             | HA (U4b): HB (U4b)                                                                  | 40             | 01000000       | 64             |
| 77                 | 4D             | Vertical active=600 lines (L8b)                                                     | 58             | 01011000       | 88             |
| 78                 | 4E             | Vertical blanking= 38 lines (L8b)                                                   | 26             | 00100110       | 38             |
| 79                 | 4F             | HA (U4b): HB (U4b)                                                                  | 20             | 00100000       | 32             |
| 80                 | 50             | H sync. Offset= 93 pixels                                                           | 5D             | 01011101       | 93             |
| 81                 | 51             | H sync. Width= 35 pixels                                                            | 23             | 00100011       | 35             |
| 82                 | 52             | V sync. Offset= 17lines                                                             | 15             | 00010101       | 21             |
| 83                 | 53             | V sync. Width=5 lines                                                               | 04             | 00000100       | 4              |
| 84                 | 54             | H image size = 220 mm (L8b)                                                         | DC             | 11011100       | 220            |
| 85                 | 55             | V image size = 129 mm (L8b)                                                         | 81             | 10000001       | 129            |
| 86                 | 56             | Horizontal Image (U4b): Vertical Image (U4b)                                        | 00             | 00000000       | 0              |
| 87                 | 57             | No Horizontal Border=0                                                              | 00             | 00000000       | 0              |
| 88                 | 58             | No Vertical Border=0                                                                | 00             | 00000000       | 0              |
| 89                 | 59             | EDID Module revision                                                                | 00             | 00000000       | 0              |
| 90                 | 5A             | Flag                                                                                | 00             | 00000000       | 0              |
| 91                 | 5B             | Flag                                                                                | 00             | 00000000       | 0              |
| 92                 | 5C             | Flag                                                                                | 00             | 00000000       | 0              |
| 93                 | 5D             | Dummy Descriptor                                                                    | FE             | 11111110       | 254            |
| 94                 | 5E             | Flag                                                                                | 00             | 00000000       | 0              |
| 95                 | 5F             | PC Maker P/N 1 <sup>st</sup> Character =M                                           | 00             | 00000000       | 0              |

| Byte#<br>(Decimal) | Byte#<br>(HEX) | Field Name & Comments                                                           | Value<br>(HEX) | Value<br>(BIN) | Value<br>(DEC) |
|--------------------|----------------|---------------------------------------------------------------------------------|----------------|----------------|----------------|
| 96                 | 60             | PC Maker P/N 2 <sup>nd</sup> Character =3                                       | 00             | 00000000       | 0              |
| 97                 | 61             | PC Maker P/N 3 <sup>rd</sup> Character =4                                       | 00             | 00000000       | 0              |
| 98                 | 62             | PC Maker P/N 4 <sup>th</sup> Character =9                                       | 00             | 00000000       | 0              |
| 99                 | 63             | PC Maker P/N 5 <sup>th</sup> Character =5                                       | 00             | 00000000       | 0              |
| 100                | 64             | LCD Supplier EEDID Revision # =1.0                                              | 00             | 00000000       | 0              |
| 101                | 65             | Manufacturer P/N = 1                                                            | 00             | 00000000       | 0              |
| 102                | 66             | Manufacturer P/N = 5                                                            | 00             | 00000000       | 0              |
| 103                | 67             | Manufacturer P/N = P                                                            | 00             | 00000000       | 0              |
| 104                | 68             | Manufacturer P/N = X                                                            | 00             | 00000000       | 0              |
| 105                | 69             | Manufacturer P/N = 1                                                            | 00             | 00000000       | 0              |
| 106                | 6A             | Manufacturer P/N = 4                                                            | 00             | 00000000       | 0              |
| 107                | 6B             | Manufacturer P/N(If <13char, then terminate with ASCII code, set remaining=20h) | 00             | 00000000       | 0              |
| 108                | 6C             | Flag                                                                            | 00             | 00000000       | 0              |
| 109                | 6D             | Flag                                                                            | 00             | 00000000       | 0              |
| 110                | 6E             | Flag                                                                            | 00             | 00000000       | 0              |
| 111                | 6F             | Data Type Tag                                                                   | FE             | 11111110       | 254            |
| 112                | 70             | Flag                                                                            | 00             | 00000000       | 0              |
| 113                | 71             | SMBUS Value = 20 nit                                                            | 00             | 00000000       | 0              |
| 114                | 72             | SMBUS Value = 28 nit                                                            | 00             | 00000000       | 0              |
| 115                | 73             | SMBUS Value = 40 nit                                                            | 00             | 00000000       | 0              |
| 116                | 74             | SMBUS Value = 56 nit                                                            | 00             | 00000000       | 0              |
| 117                | 75             | SMBUS Value = 79 nit                                                            | 00             | 00000000       | 0              |
| 118                | 76             | SMBUS Value = 111 nit                                                           | 00             | 00000000       | 0              |
| 119                | 77             | SMBUS Value = 156 nit                                                           | 00             | 00000000       | 0              |
| 120                | 78             | SMBUS Value = max nit                                                           | 00             | 00000000       | 0              |
| 121                | 79             | Number of LVDS channels=1                                                       | 01             | 00000001       | 1              |
| 122                | 7A             | Panel Self Test (00-Not Present, 01-Present)                                    | 00             | 00000000       | 0              |
| 123                | 7B             | (If<13 char, then terminate with ASCII code 0Ah,set remaining char=20h)         | 00             | 00000000       | 0              |
| 124                | 7C             | (If<13 char, then terminate with ASCII code 0Ah,set remaining char=20h)         | 00             | 00000000       | 0              |
| 125                | 7D             | (If<13 char, then terminate with ASCII code 0Ah,set remaining char=20h)         | 00             | 00000000       | 0              |
| 126                | 7E             | Extension Flag = 00                                                             | 00             | 00000000       | 0              |
| 127                | 7F             | Checksum                                                                        | C8             | 11001000       | 200            |